TOPIC: BUSINESS CALCULATIONS (FINANCIAL ASPECTS OF A BUSINESS)

N.B: CONTINUATION OF NOTES: Please copy the following notes in your Commerce Note book for Business Calculations.

1. HOW TO USE MARK-UP TO GET GROSS PROFIT:

When Mark-up is known and cost of sales is also provided, we easily compute the figure of Gross profit by multiplying Mark-up by the Cost of sales.

Gross profit = Mark-up x Cost of sales.

Example:1

The financial records of a business are:

Cost of goods sold shs 6,000,000; Mark-up = 25%, Expenses shs 300,000. Calculate:

(i) Gross profit
(ii) Net profit.
(iii) Turnover(Net sales).
(iv) Margin.

Solution:

i) Gross profit = Mark-up x Cost of goods sold.
= 25/100 x shs 6,000,000
= shs 1,500,000

ii) Net profit = Gross profit – Expenses
= shs 1,500,000 – shs 300,000
= shs 1,200,000

iii) Turnover = Cost of goods sold + Gross profit
= shs 6,000,000 + shs 750,000
= shs 7,500,000

iv) Margin $= \frac{\text{Gross profit}}{\text{Turnover}} \times 100$

$= \frac{1,500,000}{7,500,000} \times 100$

= **20%**

2. USING MARGIN TO GET GROSS PROFIT:

When margin is known and the figure of Net sales is provided, we can get the gross profit as follows:

Gross profit = Margin x Net sales

Example:2

A trader's books of accounts reveal the following:

Net sales shs 12,000,000; Margin **25%;** and Expenses shs 2,500,000. Calculate the:

(i) Gross profit.
(ii) Cost of sales (Cost of Goods sold)

(iii) Net profit.

Solution:

i) Gross profit = Margin **x** Net sales
= 25/100 **x** shs 12,000,000
= shs 3,000,000

ii) Cost of sales = Net sales – Gross profit
= shs 12,000,000 – shs 3,000,000
= shs 9,000,000.

iii) Net profit = Gross profit – Expenses
= shs 9,000,000 – shs 2,500,000
= shs 6,250,000.

Example 3: (where Mark-up is converted to Margin)

Given a trader's records as follows:

Net sales shs 4,000,000

Mark-up = **25%**

Expenses shs 160,000

Calculate the: (i) Gross profit (ii) Cost of sales (iii) Net profit.

Solution:

N.B: In the above question, Mark-up cannot be applied to Net sales. Hence convert Mark-up to Margin

Mark-up ------------------------------ Margin

$\frac{25}{100}$ ……………………………… $\frac{25}{100+25}$ $\frac{25}{125}$ = $\mathbf{\frac{1}{5}}$

(i) Gross profit = Margin **x** Net sales
= 1/5 **x** shs 4,000,000
= shs 800,000.

ii) Cost of sales = Net sales = Gross profit
= shs 4,000,000 – shs 800,000
= shs 3,200,000.

iii) Net profit = Gross profit – Expenses
= shs 800,000 –shs 160,000
= shs 640,000.

Example 4(Where Margin is converted to Mark-up)

In a business firm, Cost of sales is shs 2,000,000 and Margin is 20%. Calculate the:

(i) Gross profit

(ii) Turnover(Net sales)

Solution:

N.B: Margin cannot be applied to Cost of sales. Therefore, we convert Margin to Mark-up.

Margin -------------------------------- Mark-up

20/100= 1 ----------------------------- 1 = **1**

5 5-1 **4**

i) Gross profit = Mark-up x Cost of sales
= ¼ x shs 2,000,000
= shs 500,000.

ii) Turnover (Net sales) = Cost of sales + Gross profit
= shs 2,000,000 + shs 500,000
= shs 2,500,000.

EXERCISES:

1. The records of a business from the books of accounts show that: Mark-up is 25%; Net sales shs 3,000,000 and overheads shs 400,000. Use the information to calculate:

i) Gross profit.
ii) Cost of goods sold.
iii) Net profit.

2. The following business records are provided:
Average Margin = 20%
Cost of goods sold shs 4,500,000
Expenses shs 180,000.
Calculate the: (i) Gross profit (ii) Turnover (iii) Net profit.

RATE OF STOCK TURN/RATE OF TURNOVER/STOCK-TURN RATIO.

Definition: This is the number of times stock is replaced in a given period of time.
It measures the operative efficiency of the business in a given period of time. The higher the value the more efficient the business in terms of sales.

The Rate of Stock turn is of two types

(a) Rate of stock turn **at cost price**.
(b) Rate os stock turn **at selling price**.
(a) Rate of stock turn at cost price: When stock is valued at cost price the Rate of Stock turn is computed using the formula below:

$$\textbf{Rate of stock turn} = \frac{\text{Cost of goods sold (Cost of sales)}}{\text{Average stock at cost price}} \ \textbf{OR} \ \frac{\text{Cost of goods sold (cost of sales)}}{\text{Average stock}}$$

The value of the Rate of Stock turn **must** be accompanied by the word **times.**

N.B: When a question does not specify how stock has been valued then we use the formula above.

Example:

The following information of a trader is provided:
Net sales shs 2,500,000, Gross profit shs 1,300,000, Opening stock shs 150,000 and Closing stock shs 450,000.
Calculate the:

(i) Cost of goods sold
(ii) Average stock
(iii) Rate of Stock turn.

Solution:

(i) Cost of goods sold = Net sales – Gross profit
= shs 2,500,000 – shs 1,300,000
= shs 1,200,000

ii) Average stock = $\frac{\text{Opening stock + Closing stock}}{2}$

$= \frac{\text{shs } 150{,}000 + \text{shs } 450{,}000}{2} = \text{shs } 300{,}000$

iii) Rate of stock turn = $\frac{\text{Cost of goods sold}}{\text{Average stock}}$

$= \frac{\text{shs } 1{,}200{,}000}{300{,}000}$

= **4 times**

(b) Rate of stock turn at selling price.

When stock in a business is valued at its selling price, the rate of stock turn is calculated using the formula below:

Rate of stock turn = $\frac{\textbf{Net sales}}{\textbf{Average stock at selling price}}$.

Example: A trader's records show that: Net sales (Turnover) are shs 2,200,000; Average stock at selling price shs 305,750. Determine the Rate of stock turn.

Solution: Rate of stock turn = $\frac{\text{Net sales}}{\text{Average stock at selling price}}$

$= \frac{\text{shs } 2{,}200{,}000}{\text{shs } 305{,}750}$

= 7.1954

= **7.2 times**

NET PROFIT RATIO (NET PROFIT AS A PERCENTAGE OF NET SALES):

This is defined as Net profit expressed as a percentage of the Net sales (Turnover).

Net profit ratio simply indicates the amount of net profit which a firm gets for every one hundred shillings of the Net sales. It helps a trader to know the level of profitability of the business. It is calculated using the following formula:

Net profit ratio = $\frac{\textbf{Net profit}}{\textbf{Net sales}} \times 100$

N.B: The answer must be indicated as a percentage e.g 31.7%

Example:

The financial records of a business are:

Net sales shs 625,000

Cost of sales shs 500,000

Average stock shs 100,000

Gross profit shs 125,000

Expenses shs 50,000

Calculate: (a) (i) Gross profit (ii) Net profit (iii) Net profit ratio

(b) Briefly comment on the value of Net profit ratio.

Solution:

(i) Gross profit = Net sales - Cost of sales
= shs 625,000 – shs 500,000
= shs 125,000.

(ii) Net profit = Gross profit – Expenses
= shs 125,000 – shs 50,000
= shs 75,000.

(iii) Net profit ratio = $\frac{\text{Net profit}}{\text{Net sales}} \times 100$

$= \frac{\text{shs } 75{,}000}{\text{Shs } 625{,}000} \times 100$

= **12%**

b) For every shs 100 of net sales, the business gets a net profit of shs 12. It is not a very profitable business.

<u>EXERCISE:</u>

1. State any **four** ways of increasing Net profit ratio in business enterprises.
2. Suggest any **four** ways in which a trader should use the net profit of a business.
3. How is net profit treated in the Balance sheet of a business firm?
4. Mention **two** reasons for drawing An Income statement in a business.
5. Identify any **four** sources of capital for a small retail business.
6. Define the term **Assets**. Give four examples of assets available in your home.
7. Distinguish between **Current assets** and **Non-current assets** (Fixed assets). Give **three** examples of each in a business firm.
8. What is meant by the term **Liabilities**?
9. Differentiate between **Long term liabilities** and **Current Liabilities**. Give examples in each case.
10. Define the term **Capital owned**.
11. Define a **Balance sheet**.
12. State the purpose of the Balance sheet to a trader.
13. State the Fundamental Accounting Equation. (refer to S.2 Accounts work)